

REMARKS

Claims 1 to 10 were rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Claims 1, 3 and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by Fujii (US 5,663,628). Claims 1, 2, 5, 6, 11 and 12 were rejected under 35 U.S.C. §102(b) as being anticipated by Yoshikawa et al. (US 6,317,697). Claims 4 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii in view of Seri et al. (US 5,994,877). Claims 7, 8 and 13 to 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii and Yoshikawa et al. in view of Kinoshita (US 5,703,469). Claims 16, 17, 19 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii and Yoshikawa et al. in view of Kinoshita.

Claim 1 has been amended.

Reconsideration of the application based on the following is respectfully requested

Rejections under 35 U.S.C. §112, first paragraph

Claims 1 to 10 were rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement.

Claim 1 has been amended as suggested by the Examiner.

Withdrawal of the rejections under 35 U.S.C. §112, first paragraph is respectfully requested.

Rejections under 35 U.S.C. §102(b)

Claims 1, 3 and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by Fujii (US 5,663,628).

Fujii shows a battery system and a curve of a number of cycles plotted against a depth of discharge.

Claim 1 recites: "A method for determining a deterioration of a battery, comprising:
measuring respective numbers of charge and discharge cycles at a plurality of depths of discharge of the battery;

determining a respective characteristic deterioration value for at least some of the charge and discharge cycles at each of the plurality of depths of discharge using a deterioration curve characteristic of a type of the battery; and

summing the determined characteristic deterioration values so as to obtain the deterioration of the battery.”

Fujii does not teach or disclose either “determining a respective characteristic deterioration value for at least some of the charge and discharge cycles at each of the plurality of depths of discharge using a deterioration curve characteristic of a type of the battery” or “summing the determined characteristic deterioration values so as to obtain the deterioration of the battery.”

There is no indication at all in Fujii that deterioration values are determined at each of the plurality of discharge depths. The cite to Fig. 4 in the Office Action is just to an overall table, and the cite to Col. 10, lines 1 to 23 of Fujii does not indicate any summing at all. In fact Fujii does not sum and deterioration values as is clear for example from col. 11, lines 54 to col. 12, line 12 which discusses setting a single discharge depth.

With further respect to claim 3, claim 3 recites the method as recited in claim 1 wherein the deterioration curve is a continuous function defining a dependence of each characteristic deterioration value on the depth of the respective charge or discharge for the battery type. The curve in Fig. 6 of Fujii cited in the Office action is not a deterioration curve defining a dependence “of each characteristic value” as claimed, but rather cycle/depth curve. See Fig. 2 of the present application showing a deterioration curve. The deterioration curve limitation of Claim 9 is also not shown in Fujii.

Claims 1, 2, 5, 6, 11 and 12 were rejected under 35 U.S.C. §102(b) as being anticipated by Yoshikawa et al. (US 6,317,697).

Yoshikawa discloses a battery life determination apparatus.

Claim 1 recites: “A method for determining a deterioration of a battery, comprising:
measuring respective numbers of charge and discharge cycles at a plurality of depths of discharge of the battery;

determining a respective characteristic deterioration value for at least some of the charge and discharge cycles at each of the plurality of depths of discharge using a deterioration curve characteristic of a type of the battery; and

summing the determined characteristic deterioration values so as to obtain the deterioration of the battery.”

Yoshikawa does not teach or disclose any of the steps, including “measuring respective numbers of charge and discharge cycles at a plurality of depths of discharge of the battery.” No plurality of depths for example is discussed in Yoshikawa at all, and the numbers of charge and discharge cycles are not measured at all.

Withdrawal of the rejection under 35 U.S.C. §102(b) thus is respectfully requested.

Rejections under 35 U.S.C. §103(a)

Claims 4 and 10 were rejected under 35 U.S. §103(a) as being unpatentable over Fujii in view of Seri et al. (US 5,994,877). Claims 7, 8 and 13 to 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii and Yoshikawa et al. in view of Kinoshita (US 5,703,469). Claims 16, 17, 19 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii and Yoshikawa et al. in view of Kinoshita.

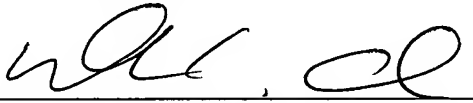
In view of the above comments with respect to Fujii and Yoshikawa, withdrawal of the rejections under 35 U.S.C. §103(a) thus is respectfully requested.

CONCLUSION

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

Respectfully submitted,

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